

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment and announce a public hearing on a draft permit from the Department of Environmental Quality (DEQ) to limit air pollution from a facility on Alternate Route 58, in Virginia City, Wise County, Virginia.

PUBLIC COMMENT PERIOD: January 12, 2008, to February 26, 2008

PUBLIC HEARING: St. Paul High School Auditorium, 3207 Fourth Avenue, St. Paul, Virginia on February 11, 2008, beginning at 7 pm.

PERMIT NAME: Prevention of Significant Deterioration (PSD) Permit issued by DEQ, under the authority of the Air Pollution Control Board

APPLICANT NAME AND REGISTRATION NUMBER: Virginia Electric and Power Company; 11526

FACILITY NAME AND ADDRESS: Virginia City Hybrid Energy Center; Alternate Route 58, Virginia City, Wise County, Virginia

PROJECT DESCRIPTION: Virginia Electric and Power Company has applied for a permit to construct the Virginia City Hybrid Energy Center (VCHEC); a circulating fluidized bed (CFB) electric power generating facility having a gross electrical output capacity of approximately 668 megawatts. The facility will be classified as a major source of air pollution and will be located just north and east of Alternate Route 58 in Virginia City, Wise County, Virginia. The applicant proposes to use the following fuels for each CFB boiler: 1,763,000 tons per year (tpy) of bituminous coal, 1,620,000 tpy of coal refuse and 685,000 tpy of wood.

EMISSIONS: The maximum annual emissions of air pollutants from the facility are expected to be: 340.9 tpy of filterable particulate matter (PM), 365.96 tpy of total filterable & condensable PM with a diameter less than or equal to 10 microns (PM-10), 359.26 tpy of PM with a diameter less than or equal to 2.5 microns, 3,369.13 tpy of sulfur dioxide (SO₂), 1,970.55 tpy of nitrogen oxides (NO_x), 4,133.8 tpy of carbon monoxide, 139.08 tpy of volatile organic compounds, 137.18 tpy of sulfuric acid mist, 181.08 tpy of hydrogen chloride, 12.9 tpy of hydrogen fluoride, and 0.037 tpy of mercury.

CLASS II AIR QUALITY ANALYSIS: Class II multi-source air quality modeling analysis was performed for NO_x, PM-10 and SO₂ for comparison to the National Ambient Air Quality Standards (NAAQS) and allowable Class II PSD increments. Based on DEQ's review of the NAAQS and PSD increment analyses, the proposed facility would not cause or significantly contribute to a predicted violation of any applicable NAAQS or Class II PSD increment. The values presented below represent the estimated increment consumed by the proposed facility. The 24-hour modeled concentration of PM-10 (28.11 ug/m³) would consume 94% and the annual modeled concentration of PM-10 (8.81 ug/m³) would consume 52% of their respective increments. The 3-hr modeled concentration of SO₂ (186.1 ug/m³) would consume 36% of its increment, the 24-hour modeled concentration of SO₂ (30.03 ug/m³) would consume 33% of its increment, and the annual modeled concentration of SO₂ (2.21 ug/m³) would consume 11% of its increment. The annual modeled concentration of NO_x (2.37 ug/m³) would consume 9% of its respective increment. Modeled concentrations of toxic pollutants are less than Significant Ambient Air Concentrations.

<u>Pollutant</u>	<u>Averaging Period</u>	<u>Class II PSD Increments (ug/m³)</u>	<u>Increment Consumed by VCHEC (ug/m³)</u>	<u>Degree of Increment Consumed by VCHEC</u>
NO _x	Annual	25	2.37	9%
PM-10	24-hour	30	28.11	94%
	Annual	17	8.81	52%
SO ₂	3-hour	512	186.1	36%
	24-hour	91	30.03	33%
	Annual	20	2.21	11%

CLASS I AIR QUALITY ANALYSIS: Class I air quality modeling analysis was performed for NO_x, PM-10 and SO₂ for comparison to allowable Class I PSD increments. Based on DEQ's review of the PSD increment analyses, the proposed facility would not cause or significantly contribute to a predicted violation of any applicable Class I PSD increment. The values presented below represent the estimated increment consumed by the proposed facility. For the Cohutta Wilderness Area, the 24-hour modeled concentration of PM-10 (0.056 ug/m³) would consume 0.7% and the annual modeled concentration of PM-10 (0.0010 ug/m³) would consume <0.1% of their respective increments. The 3-hr modeled concentration of SO₂ (0.43 ug/m³) would consume 2% of its increment, the 24-hour modeled

concentration of SO₂ (0.18 µg/m³) would consume 4% of its increment, and the annual modeled concentration of SO₂ (0.0027 µg/m³) would consume 0.1% of its increment. The annual modeled concentration of NO_x (0.00055 µg/m³) would consume <0.1% of its respective increment. For the Great Smoky Mountains National Park, the 24-hour modeled concentration of PM-10 (0.116 µg/m³) would consume 1% and the annual modeled concentration of PM-10 (0.0039 µg/m³) would consume <0.1% of their respective increments. The 3-hr modeled concentration of SO₂ (1.45 µg/m³) would consume 6% of its increment, the 24-hour modeled concentration of SO₂ (0.42 µg/m³) would consume 8% of its increment, and the annual modeled concentration of SO₂ (0.013 µg/m³) would consume 0.7% of its increment. The annual modeled concentration of NO_x (0.0054 µg/m³) would consume 0.2% of its respective increment. For the James River Face Wilderness Area, the 24-hour modeled concentration of PM-10 (0.049 µg/m³) would consume 0.6% and the annual modeled concentration of PM-10 (0.0032 µg/m³) would consume <0.1% of their respective increments. The 3-hr modeled concentration of SO₂ (0.63 µg/m³) would consume 3% of its increment, the 24-hour modeled concentration of SO₂ (0.16 µg/m³) would consume 3% of its increment, and the annual modeled concentration of SO₂ (0.0101 µg/m³) would consume 0.5% of its increment. The annual modeled concentration of NO_x (0.0034 µg/m³) would consume 0.1% of its respective increment. For the Joyce Kilmer Wilderness Area, the 24-hour modeled concentration of PM-10 (0.0804 µg/m³) would consume 1% and the annual modeled concentration of PM-10 (0.0018 µg/m³) would consume <0.1% of their respective increments. The 3-hr modeled concentration of SO₂ (0.71 µg/m³) would consume 3% of its increment, the 24-hour modeled concentration of SO₂ (0.27 µg/m³) would consume 5% of its increment, and the annual modeled concentration of SO₂ (0.005 µg/m³) would consume 0.3% of its increment. The annual modeled concentration of NO_x (0.0015 µg/m³) would consume <0.1% of its respective increment. For the Linville Gorge Wilderness Area, the 24-hour modeled concentration of PM-10 (0.122 µg/m³) would consume 2% and the annual modeled concentration of PM-10 (0.0053 µg/m³) would consume 0.1% of their respective increments. The 3-hr modeled concentration of SO₂ (2.55 µg/m³) would consume 10% of its increment, the 24-hour modeled concentration of SO₂ (0.47 µg/m³) would consume 9% of its increment, and the annual modeled concentration of SO₂ (0.019 µg/m³) would consume 1% of its increment. The annual modeled concentration of NO_x (0.0103 µg/m³) would consume 0.4% of its respective increment. For the Shining Rock Wilderness Area, the 24-hour modeled concentration of PM-10 (0.034 µg/m³) would consume 0.4% and the annual modeled concentration of PM-10 (0.0023 µg/m³) would consume <0.1% of their respective increments. The 3-hr modeled concentration of SO₂ (0.7 µg/m³) would consume 3% of its increment, the 24-hour modeled concentration of SO₂ (0.111 µg/m³) would consume 2% of its increment, and the annual modeled concentration of SO₂ (0.0066 µg/m³) would consume 0.3% of its increment. The annual modeled concentration of NO_x (0.00175 µg/m³) would consume <0.1% of its respective increment.

<u>Class I Area</u>	<u>Pollutant and Averaging Period</u>	<u>Class I PSD Increments (ug/m³)</u>	<u>Increment Consumed by VCHEC (ug/m³)</u>	<u>Degree of Increment Consumed by VCHEC</u>
Great Smoky Mountains	SO ₂ -3hour	25	1.45	6%
	SO ₂ -24hour	5	0.42	8%
	SO ₂ -Annual	2	0.013	0.7%
	NO _x -Annual	2.5	0.0054	0.2%
	PM10-24hour	8	0.116	1%
	PM10-Annual	4	0.0039	<0.1%
Linville Gorge	SO ₂ -3hour	25	2.55	10%
	SO ₂ -24hour	5	0.47	9%
	SO ₂ -Annual	2	0.019	1%
	NO _x -Annual	2.5	0.0103	0.4%
	PM10-24hour	8	0.122	2%
	PM10-Annual	4	0.0053	0.1%
Cohutta	SO ₂ -3hour	25	0.43	2%
	SO ₂ -24hour	5	0.18	4%
	SO ₂ -Annual	2	0.0027	0.1%
	NO _x -Annual	2.5	0.00055	<0.1%
	PM10-24hour	8	0.056	0.7%
	PM10-Annual	4	0.0010	<0.1%

<u>Class I Area</u>	<u>Averaging Period</u>	<u>Class I PSD Increments (ug/m³)</u>	<u>Increment Consumed by VCHEC (ug/m³)</u>	<u>Degree of Increment Consumed by VCHEC</u>
James River Face	SO2-3hour	25	0.63	3%
	SO2-24hour	5	0.16	3%
	SO2-Annual	2	0.0101	0.5%
	NOx-Annual	2.5	0.0034	0.1%
	PM10-24hour	8	0.049	0.6%
	PM10-Annual	4	0.0032	<0.1%
Joyce Kilmer	SO2-3hour	25	0.71	3%
	SO2-24hour	5	0.27	5%
	SO2-Annual	2	0.005	0.3%
	NOx-Annual	2.5	0.0015	<0.1%
	PM10-24hour	8	0.0804	1%
	PM10-Annual	4	0.0018	<0.1%
Shining Rock	SO2-3hour	25	0.7	3%
	SO2-24hour	5	0.111	2%
	SO2-Annual	2	0.0066	0.3%
	NOx-Annual	2.5	0.00175	<0.1%
	PM10-24hour	8	0.034	0.4%
	PM10-Annual	4	0.0023	<0.1%

CLASS I MITIGATION PLAN: While no Federal Land Manager filed a formal adverse impact finding, based on Federal Land Manager comments, the draft permit includes a mitigation plan to address potential adverse impacts in the Linville Gorge Class I Area in North Carolina. The proposed mitigation plan requires reduction and/or mitigation of sulfur dioxide emissions from VCHEC above 1,684 tons per year. Sulfur dioxide emission reduction and/or mitigation may consist of reductions at the VCHEC facility, Virginia Electric and Power Company obtaining reductions from one or more facilities in a specified geographic area or the purchase of sulfur dioxide emission allowances under 40 CFR Part 73.

ABILITY TO COMMENT ON AIR QUALITY MODEL: Pursuant to 9 VAC 5-80-1725 B of Virginia air quality regulations, DEQ is soliciting comments on the use of the alternative air quality model, CALPUFF. Virginia air quality regulations require that air quality modeling be based on the preferred models identified in Appendix W to 40 CFR Part 51, otherwise known as the Guideline on Air Quality Models, except where the preferred model is inappropriate. The USEPA has reviewed the rationale for allowing Dominion Virginia Power to use the CALPUFF model for the air quality analyses for the proposed VCHEC and granted conditional approval on December 6, 2007. The USEPA states in its letter that Dominion's documentation "fulfills the criteria for selecting CALPUFF as an alternative to the generally preferred AERMOD model."

HOW TO COMMENT: DEQ accepts comments by e-mail, fax or postal mail. All comments must include the name, address and telephone number of the person commenting and be received by DEQ within the comment period. DEQ also accepts written and oral comments at public hearings. Persons desiring to make a statement at the hearing are requested to sign up on a sheet to be provided 15 minutes before the public hearing and to furnish the hearing officer with two copies of their testimony, along with any supporting documents or exhibits.

DOCUMENT AVAILABILITY: The public may review the draft permit and application at the DEQ office named below, and at the J. Fred Matthews Memorial Library, 16552 Wise Street, Saint Paul, VA. The draft permit is also available on the DEQ web site at www.deq.virginia.gov.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: Rob Feagins; Southwest Regional Office, 355 Deadmore St., P.O. Box 1688, Abingdon, VA 24212-1688; Phone: (276) 676-4835; E-mail: gfeagins@deq.virginia.gov; Fax: (276) 676-4899